

REMARKS

In view of the following remarks, the Examiner is requested to allow Claims 1-7, 9 and 10, the only claims pending and under examination in this application.

Formal Matters

Claims 1 has been amended to state that the logic that generates a virtual microarray comprising a subset of the features of the microarray controls a microarray processing component. Support for this amendment can be found throughout the specification (see, e.g., page 15, lines 24 to 31).

Claim 1 has also been amended to remove the word "physical" in describing the microarray, as this term was deemed redundant by the Examiner (during the interview).

Claim 1 has also been amended to remove the term "catalog".

Claim 1 has also been amended to change the word "said" to "the" to be consistent with the general claim language employed.

Claims 2, 6, 7 and 9 have been amended to be consistent with the amendments to Claim 1.

Claims 2, 3 and 6 have been amended to change the word "includes" to "comprises" to be consistent with the general claim language employed.

Claim 10 has been added and specifies that the microarray processing component of claim 7 is a microarray scanner. Support for this new claim can be found in both the claims as originally filed (e.g., Claim 7) as well as throughout the specification (see, e.g., page 15, lines 24 to 31)

As no new matter is added by way of these amendments, entry of the amendments by the Examiner is respectfully requested.

Interview Summary

Applicants wish to thank Examiner Brusca for extending the courtesy of a personal interview to Applicants' representative, David Scherer, on December 10, 2007. During the interview, the rejections of record were discussed in detail.

With regard to the 112, second paragraph rejection, it was agreed that amendments to the claims would be presented that clarify the terms "physical catalog" and "logic". With regard to the 103 rejection, no agreement was reached. However, certain aspects of the invention were discussed that Applicants consider distinguish it from the cited references.

Claim Rejections 35 U S C § 112

Claims 1-7 and 9 are rejected under 35 U S C 112, second paragraph for allegedly failing to point out and distinctly claim the subject matter the Applicants regard as the invention.

The term "logic" has been held to be indefinite by the Examiner because it is not clear whether it refers to guidance or computer executable instructions.

In response, the Applicants have amended the claims to specify that the logic controls a microarray processing component to perform a function (e.g., as in Claim 1 in which the logic controls a microarray processing component to generate a virtual microarray comprising data describing a subset of the features of the microarray).

Claim 9 is held indefinite because the phrase "the catalog microarray" has insufficient antecedent basis.

In response, the Applicants have amended Claim 9 such that antecedent basis for "the microarray" (the term catalog has been removed) has sufficient antecedent basis.

In view of these amendments, the Applications respectfully request that this rejection may be withdrawn.

Claim Rejections 35 U S C § 103

Claims 1-6 are rejected under 35 U S C 103 (a) as being unpatentable over Taylor in view of Nova et al.

In order to meet its burden in establishing a rejection under 35 U.S.C. § 103 the Office must first demonstrate that the combined prior art references teach or suggest all the claimed limitations. See, for example:

- *Pharmastem Therapeutics v. Viacell et al.*, 2007 U.S. App. LEXIS 16245 (Fed. Cir. 2007) which states that "the burden falls on the patent challenger to show by clear and convincing evidence that a person of ordinary skill in the art would have had reason to attempt to make [every element of] the composition or device, or carry out the [entire] claimed process, and would have had a reasonable expectation of success in doing so," (citing *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740 (2007));
- *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 2007 U.S. App. LEXIS 14308 (Fed. Cir. 2007) which states that "[t]he Supreme Court recently explained that 'a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art,'" (citing *KSR Int'l Co.* at 1741); and
- *Dystar Textilfarben GmbH v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006) which states that "[once] all claim limitations are found in a number of prior art references, the factfinder must determine '[w]hat the prior art teaches, whether it teaches away from the claimed invention, and whether it motivates a combination of teachings from different references,'" (citing *In re Fulton*, 391 F.3d 1195, 1199-1200 (Fed. Cir. 2004)).

As amended, claim 1 is drawn to a virtualizing microarray system that includes: a microarray having a memory element physically associated with the microarray, the memory element including data that describes each feature of the physical microarray; and logic that controls a microarray processing component to generate a virtual microarray comprising data describing a subset of the features of the microarray.

In making this rejection, the Examiner asserts that Taylor shows a virtual microarray in which correspondence between positions of a physical microarray and a virtual microarray are known.

The Examiner acknowledges that Taylor does not teach a memory physically associated with the microarray that contains data describing the features thereon and/or data concerning molecules whose synthesis is directed by the molecule that binds to a probe in the microarray.

To remedy these deficiencies, the Examiner cites Nova et al., asserting that this reference teaches the physical association of a memory with an array in which the memory contains data describing the features thereon.

As amended, the claimed invention is drawn to virtualizing microarray systems that includes logic that controls a microarray processing component (e.g., a microarray scanner, a microarray-data processing system, or a microarray-data visualization system) to generate a virtual microarray comprising data describing a subset of the features of the microarray. This element of the claimed invention, as described, for example, on page 15 of the specification, allows for the identification of a subset of features on a microarray which are to be processed and analyzed during the course of the microarray processing stream (thereby excluding the non-identified features during this process).

The Applicants submit that this element of the claimed invention is neither taught nor suggested by Taylor or Nova et al.

Specifically, Taylor is drawn to selecting distinct feature data from a plurality of previously-processed microarray data sets to generate a virtual output that is of particular interest to a user (see the Abstract and Summary of the Invention sections of Taylor). Taylor is not drawn to virtualizing a single microarray using logic that controls a microarray processing component to generate a virtual microarray comprising data describing a subset of the features of the single microarray as is claimed. As Nova et al. is cited merely for its teaching of memories associated with a microarray (and not virtualizing a microarray), it fails to remedy this deficiency in Taylor.

In view of the claim amendments and the arguments above, the Applicants submit that the combined teachings of Taylor in view of Nova et al. fail to establish a *prima facie* case of obviousness. Withdrawal of this rejection is thus respectfully requested.

Claims 1 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor in view of Nova, and further in view of Ramdas et al.

As amended, the claimed invention is drawn to virtualizing microarray systems that includes logic that controls a microarray processing component (e.g., a microarray scanner, a microarray-data processing system, or a microarray-data visualization system) to generate a virtual microarray comprising data describing a subset of the features of the microarray. As discussed in detail in the previous section, the Applicants submit that this element of the claimed invention is neither taught nor suggested by Taylor or Nova et al.

Ramdas et al. is cited by the Examiner for its teaching of automated analysis of microarrays using scanners and computer controlled visualization systems.

However, the Applicants submit that these asserted teachings of Ramdas et al. fail to remedy the deficiencies in Taylor and Nova et al. recited above. Specifically, Ramdas et al. fails to teach or suggest a virtualizing microarray system that includes logic that controls a microarray processing component to generate a virtual microarray comprising data describing a subset of the features of the microarray as is claimed.

In view of the claim amendments and the arguments above, the Applicants submit that the combined teachings of Taylor in view of Nova et al. and further in view of Ramdas et al. fail to establish a *prima facie* case of obviousness. Withdrawal of this rejection is thus respectfully requested.

CONCLUSION

In view of the amendments and remarks above, the Applicants respectfully submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, please telephone Bret Field at (650) 833-7770.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§ 1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-1078, order number 10020348-1.

Respectfully submitted,
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